

REMARKS

Applicants have considered the July 28, 2006 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-3 and 5-11 were pending in this application. In response to the Office Action dated July 28, 2006, claims 1 and 8 have been amended and claims 2-3, 5-7 and 9-11 have been cancelled. New claims 12-23 have been added. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments.

The subject matter of claims 2, 5 and 6 has been added to claim 1 and the subject matter of claims 2, 9 and 10 has been added to claim 8. See also Figs. 2B and 3B and the related discussion thereof in the written description of the specification, including page 10, line 14 through page 11, line 11; and page 11, line 2 through page 13, line 2.

Newly added independent claims 16 and 20 correspond to the embodiment of Figure 4B and the related discussion thereof in the written description of the specification, including page 14, line 3 through page 15, line 15. The new claims 12, 14, 18 and 22 and new claims 13, 15 and 19 are supported at page 18, lines 1-16 of the written description and Figure 2C. The new claims 17 and 21 correspond to the original claim 5.

Applicants submit that the present Amendment does not generate any new matter issue. It is believed that this response places this case in condition for allowance. Accordingly, entry of the Amendment and prompt favorable reconsideration pursuant to 37 C.F.R. § 1.116 are respectfully requested.

*Claim Rejections Under 35 U.S.C. § 102*

Claims 1-3 and 5-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Rippel (U.S. Pat. No. 5,441,824). Applicants respectfully traverse.

Claims 1-3 and 5-11 were rejected under 35 U.S.C. § 102(e) as being anticipated by Fredriksson et al. (U.S. Pat. Pub. No. 2003/0054244). Applicants respectfully traverse.

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. Applicants submit that independent claims 1 and 8, as amended are free from the applied art for the reasons advocated below. Moreover, new independent claims 16 and 20, as well as their respective dependent claims, are patentably distinct over the art of record. Claims 2-3, 5-7 and 9-11 have been cancelled and, therefore, the rejection is moot with respect to these claims. The following is a comparison between the present claimed subject matter and the cited prior art. For the Examiner's convenience, the reference numbers from embodiments of the present invention are included below.

An aspect of the present claimed subject matter, as described in claim 1, is a bipolar battery (20) comprising: a plurality of bipolar electrodes (8); a plurality of polymer electrolyte layers (4); and a plurality of insulation layers (6), each of the insulation layer (6) being provided on an exposed portion in a periphery of at least one side of the collecting foil (1), being a flexible and adhesive insulation film, and being protruded outward beyond the collecting foil (1) with a protruding length longer than a thickness of one single cell (10), the single cell (10) being composed of the positive electrode layer (2), the negative electrode layer (3) and the electrolyte layer (4) therebetween. Further, the insulation layers (6) are bent to partially overlap each other, in order to isolate the positive electrode layer (2) from the negative electrode layer (3) within the

single cell (10) and to isolate between the electrolyte layers (4) of the neighboring single cells (10).

In claim 1, insulation layers (6) are bent to partially overlap each other (see Figures 2B and 3B). Thereby, the insulation layers (6) can isolate the positive electrode layer (2) from the negative electrode layer (3) within the single cell (10) and isolate between the electrolyte layers (4) of the neighboring single cells (10). Hence, it is possible to prevent a short circuit between the electrodes and between the single cells.

Independent claim 16 describes a bipolar battery (20) comprising: a plurality of bipolar electrodes (8); a plurality of polymer electrolyte layers (4); and a plurality of insulation layers (5), each of the insulation layer (5) being provided on an exposed portion in a periphery of at least one side of the collecting foil (1), being a flexible insulation film, and being protruded outward beyond the collecting foil (1) with a protruding length longer than a thickness of one single cell (10), the single cell (10) being composed of the positive electrode layer (2), the negative electrode layer (3) and the electrolyte layer (4) therebetween. Further, the insulation layers (5) are bent to partially overlap each other, and an insulation tape (7) further covers the bent insulation layers (5), so that the insulation layers (5) and the insulation tape (7) isolate the positive electrode layer (2) from the negative electrode layer (3) within the single cell (10) and isolate between the electrolyte layers (4) of the neighboring single cells (10).

In independent claim 16, the insulation layers (5) are bent to partially overlap each other, and an insulation tape (7) further covers the bent insulation layers (5) (see Figure 4B). Thereby, the insulation layers (5) and the insulation tape (7) isolate the positive electrode layer (2) from the negative electrode layer (3) within the single cell (10) and isolate between the electrolyte layers (4) of the neighboring single cells (10). Hence, it is possible to prevent a short circuit

between the electrodes and between the single cells. Further, by providing the insulation tape (7), the edges of the electrodes are more difficult to crumble even when the cell receives some impact to its side (see column 17, lines 18-26).

Rippel discloses a quasi-bipolar battery with a biplate sealing frame (141) provided on its periphery. Further, Fredriksson et al. disclose a bipolar battery with an electrolyte barrier (14, 22) and an elastomer (15, 22) provided on its periphery. However, Rippel and Fredriksson et al. fail to teach or suggest the feature of claims 1 and 8, in which the insulation layers are bent to partially overlap each other, in order to isolate the positive electrode layer from the negative electrode layer within the single cell and to isolate between the electrolyte layers of the neighboring single cells, and the feature of claims 16 and 20, in which the insulation layers are bent to partially overlap each other, and an insulation tape further covers the bent insulation layers, so that the insulation layers and the insulation tape isolate the positive electrode layer from the negative electrode layer within the single cell and isolate between the electrolyte layers of the neighboring single cells.

Furthermore, Rippel and Fredriksson et al. fail to teach or suggest the features that the insulation layer is an insulation film and the insulation film is protruded outward beyond the collecting foil with a protruding length longer than a thickness of one single cell, as required in each of independent claims 1, 8, 16 and 20.

Applicants would stress that the factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*,

289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). As discussed above there are significant differences between the claimed bipolar battery and vehicle and the applied art that would preclude the factual determination that Rippel or Fredriksson et al. identically describe the subject matter of claims 1 and 8 within the meaning of 35 U.S.C. § 102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 U.S.P.Q. 86 (Fed. Cir. 1986). Applicants, therefore, submit that the imposed rejection of claims 1 and 8 under 35 U.S.C. § 102 for lack of novelty as evidenced by Rippel or Fredriksson et al. is not factually viable and, hence, solicit withdrawal thereof. Moreover, new independent claims 16 and 20 are patentable over the art of record for the reasons advanced above.

The remaining dependent claims are allowable for at least the same reasons as claims 1, 8, 16 and 20 and further distinguish the bipolar battery and vehicle of the independent claims.

In view of the above amendments and remarks, Applicant submits that this amendment should be entered, the application allowed, and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

10/673,201

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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